

## ABSTRACT OF THE DISCLOSURE

A resource allocation of multiple compressed AV streams delivered over the Internet is disclosed that achieves end-to-end optimal quality through a multimedia streaming TCP-friendly transport (MSTFP) protocol that adaptively estimates the network bandwidth while smoothing the sending rate. Resources allocated dynamically according to a media encoding distortion and network degradation algorithm. A scheme is also disclosed for dynamically estimating the available network bandwidth for streaming of objects, such as MPEG4 multiple video objects, in conjunction with the MSTFP protocol. The scheme can account for packet-loss rates to minimize end-to-end distortion for media delivery.

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